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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,692	01/16/2004	Bernd Spaniol	P/4308-30	8449

7590  
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01/11/2007

EXAMINER
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ZHENG, LOIS L

ART UNIT	PAPER NUMBER
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1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/759,692	<b>Applicant(s)</b> SPANIOL, BERND	
	<b>Examiner</b> Lois Zheng	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Status of Claims*

1. Claim 1 is amended in view of the amendment filed 24 October 2006. Therefore, claims 1-2 remain under examination.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kumar et al. US 6,358,625 B1(Kumar).

Kumar teaches a niobium wire that is enriched with oxygen as claimed(col. 2 line 51 – col. 3 line 19, claims 1-2). Kumar further teaches diffusing oxygen into the bulk material of the metal substrate at elevated temperature such as 525°C as shown in example 4.

Regarding the amended claim feature, since Kumar teaches same oxygen diffusion process at the same elevated temperature as the oxygen diffusion process as disclosed in the specification of the instant invention, the examiner concludes that the oxygen enriched niobium wire as taught by Kumar inherently has the claimed high temperature resistance and does not show detectable metal vapor pressure at 1200-

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1400°C as claimed. The examiner also takes the position that oxygen is enriched in bulk material of the niobium wire of Kumar as claimed.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar.

The teachings of Kumar are discussed in paragraph 6 above.

Regarding claim 2, Kumar further teaches the niobium wire contains 500-20,000ppm of oxygen(claim 2, col. 3 line 1), which overlaps the claimed 3,000 to 30,000µg/g oxygen concentration. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed oxygen concentration range from the disclosed range of Kumar would have been obvious to one skilled in the art since Kumar teaches the same utilities in its' disclosed oxygen concentration range.

***Response to Arguments***

6. Applicant's arguments filed 24 October 2006 have been fully considered, but are not persuasive.

In the remarks, applicant argues that Kumar only discloses wires made from NbZr<sub>1</sub>%. The examiner respectfully disagrees. Even though the examples of Kumar only shows NbZr<sub>1</sub>% meta wires, the examples of Kumar are merely embodiments of Kumar's invention and they do not limit the scope of Kumar's invention. Since claim 2

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of Kumar clearly teaches that the metal wire can be niobium or niobium alloy, the examiner concludes Kumar teaches the claimed niobium wire.

Applicant further argues that Kumar only teaches enriching oxygen at the surface of the wire. The examiner respectfully disagrees since the scope of what constitute as the bulk material of the wire and what constitute the surface of the wire is not clearly differentiated in the instant specification. Like stated in paragraph 3 above, Kumar teaches the same oxygen diffusion process at the same elevated temperature range as disclosed by the instant specification. One skilled artisan would have expected the same amount of oxygen to diffuse into the bulk material of the wire. In addition, oxygen would reach deeper into the bulk material of the wire as the duration of the oxygen diffusion process of Kumar increases. Therefore, the examiner maintains that Kumar's niobium wire is enriched with oxygen in bulk material of the wire based on the broadest reasonable interpretation since oxygen does reach a certain depth into the niobium wire by the oxygen diffusion process of Kumar.

Applicant further argues that the pure niobium wire would fail given Kumar's temperature and the Kumar's NbZr<sub>1</sub>% forms Zr vapor at 1200-1400°C. The examiner does not find applicant's argument persuasive since these arguments are not supported by factual evidence data demonstrating that applicant's allegations are true. Therefore, applicant's arguments are merely considered as conclusive statement.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

  
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